

Appln. No. 09/435,770
Amd. dated November 1, 2004
Reply to Office Action of July 1, 2004

Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1 (Currently amended). A purified non-reducing saccharide-forming enzyme, which forms a non-reducing saccharide having a trehalose structure as an end unit from a reducing partial starch hydrolyzate, having the amino acid sequence of SEQ ID NO:1 or ~~an amino acid sequence having at least 80% sequence identity to the amino acid sequence of SEQ ID NO:1, and which has~~ and an optimum temperature of over 40°C but below 60°C.

Claims 2-8 (Cancelled).

9 (Currently amended). The purified enzyme of claim 13, wherein said microorganism is a member selected from the group consisting of Arthrobacter sp. S34, FERM BP-6450, and mutants thereof.

Claims 10-12 (Cancelled).

13 (Currently amended). A purified non-reducing saccharide-forming enzyme, which is obtainable from a microorganism of the genus *Arthrobacter*, wherein said enzyme has the following physicochemical properties:

(1) Action

Forming a non-reducing saccharide having a trehalose structure as an end unit from a reducing partial starch

hydrolyzate having a degree of glucose polymerization of 3 or higher;

(2) Molecular weight

About 75,000 \pm 10,000 daltons on sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE);

(3) Isoelectric point (pI)

About 4.5 \pm 0.5 on isoelectrophoresis using ampholyte;

(4) Optimum temperature

About 50°C when incubated at pH 6.0 for 60 min;

(5) Optimum pH

About 6.0 when incubated at 50°C for 60 min;

(6) Thermal stability

Stable up to a temperature of about 55°C when incubated at pH 7.0 for 60 min.; and

(7) pH stability

Stable at pHs of about 5.0 to about 10.0 when incubated at 4°C for 24 hours.

Claims 14-58 (Cancelled).